JAPANESE DISCOMYCETE NOTES XVIII. HUMARIA VELENOVSKYI COMB. NOV. (PYRONEMATACEAE, MYCOLACHNEEAE)[1]

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In the course of a series of studies relating to application of urea and of lime nitrogen to forest soils conducted by the junior author in Japan, a number of unusual Operculate Discomycetes have been collected. One of these, reported here on litter covering the surface of the ground, appears to be known previously only from Czechoslovakia, where it was reported by Svrček *(1948)* from two collections under the name *Lachnea velenovskyi* Vacek.

The species is highly characteristic in the color of the hymenium (luteus to ochraceous according to Svrček, "Capusine Buff," "Orange-Pink," "Light Salmon-Orange," "Salmon-Buff," "Pale Ochraceous-Buff," or "Pale Pinkish Buff" [Ridgway, *1912*] according to the junior author's observations). Its ascospores are also diagnostic, being densely and delicately warted (FIG. 2), with two, small, polar oil guttules which take up Sudan IV dye. The setae or hairs on the apothecium are also most unusual in shape in being very broad based, conically tapering to the tip, and multiseptate (FIG. 3).

Lachnea, an invalid name for a fungus genus, cannot be us ., and the species must be transferred to some other genus of the Py onemataceae, Mycolachneeae (Korf, *1972*). In several respects it agrees well with *Humaria* Fuckel (= *Mycolachnea* Maire). Like the type species of that genus, *H. hemisphaerica* (Wigg. per Gray) Fckl., it has cupulate apothecia (FIG. 1), but they are somewhat smaller (3-9 mm diam *fide* Svrček, up to 1.7 cm diam according to the junior author) and shallower. It is thus somewhat intermediate between *Humaria* and *Trichophaea*

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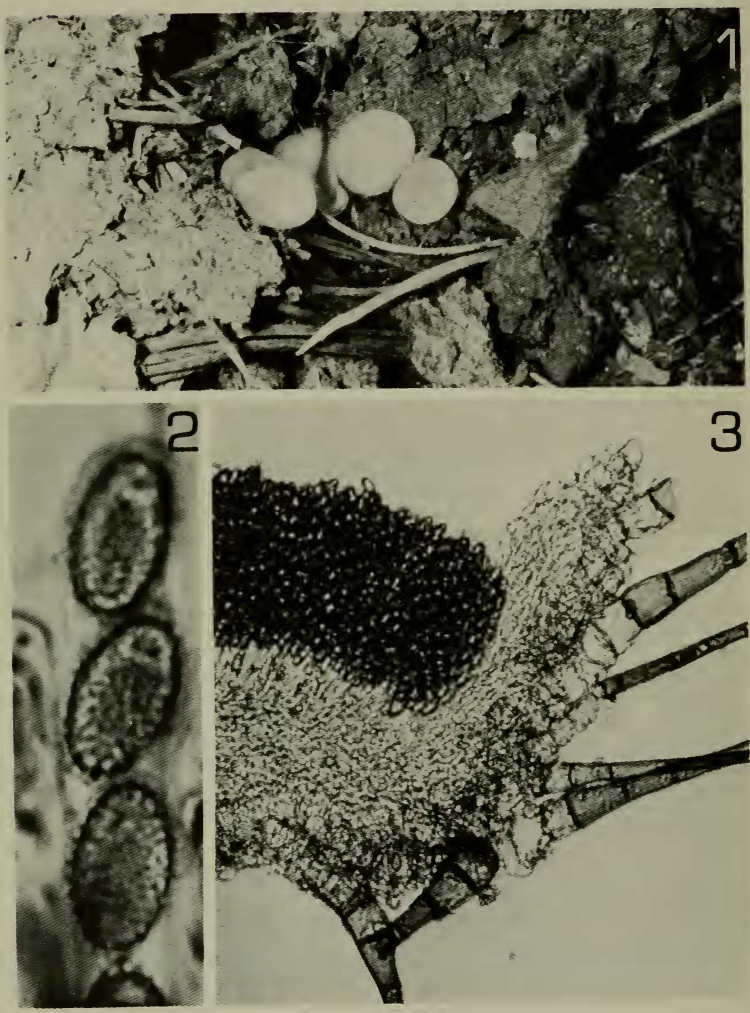
1. Previous articles in this series appeared in *Science Reports of Yokohama National University, Sect. 2, 7:* 7-35 (1958); *Bulletin of the National Science Museum (Tokyo) 4:* 389-400 (1959); *Transactions of the Mycological Society of Japan 6:* 74. (1965[1966]).

2. Supported in part by National Science Foundation Grant GB-8548.



FIGS. 1-3. *Humaria velenovskyi*. FIG. 1. Apothecia developed on the forest ground where nightsoil had been illegally dumped, approx. × 1.5 (#790). FIG. 2. Ascospores in an ascus, showing the warted epispore, approx. × 1500 (#1657). FIG. 3. Vertical section of a portion of an apothecium, approx. × 150 (#1657). Photographs by N. Sagara.

Boudier, which tends to have still smaller, discoid or lenticular apothecia, and a hymenium always devoid of carotenoid pigments (white to buff or brown). In size and shape the Japanese collections recall *T. hemisphaerioides* (Mouton) Graddon, an unusually large and unusually cupulate species for that genus. Whether these two genera can be kept apart, as treated by Korf *(1972)* and by most of the French school of discosystematists, or whether they should be merged as advocated by Eckblad *(1968)*, is as yet unanswered. We have decided to assign the species to *Humaria* sensu stricto. If the two genera are merged later, *Humaria* being the older name will stand, and no new combination will be required.

Thirteen Japanese collections are reported here, all but one (#790) from field experimental plots in various types of forest (TABLE I). It has also been seen but not collected on other plots.

TABLE I

Specimen No.[a]	Treatment[b]	Date of Treatment	Date Collected
(KYOTO Prefecture, 200 m., *Pinus densiflora & Chamaecyparis obtusa*)[c]			
844	urea	19. II.67	3. XI.67
983	urea	13.VIII.67	4. XII.67
1870	urea	4. VI.70	13. X.70
(SHIGA Prefecture, 100 m., *Pinus densiflora*)			
785	urea	25. XI.66	26. X.67
790	nightsoil	unknown	26. X.67
(TOYAMA Prefecture, 1400 m., *Fagus crenata*)			
1349	urea	10.VIII.68	25. IX.68
(TOYAMA Prefecture, 1750 m., *Abies mariesii & Tsuga diversifolia*)			
1360	urea	9.VIII.68	27. IX.68
1467	urea	9.VIII.68	9. XI.68
1628	urea	9.VIII.68	19. VII.69
1657	urea	9.VIII.68	30.VIII.69
1685[d]	urea	9.VIII.68	6. X.69
(TOYAMA Prefecture, 2300 m., *Pinus pumila*)			
1659	urea	9.VIII.68	30.VIII.69
1660	lime nitrogen	9.VIII.68	30.VIII.69

[a]. Collections in personal herbarium of N. Sagara.

[b]. Urea and lime nitrogen hand scattered on individual plots 0.5 × 1.0 m., at rates of 40, 80, 160, or 320 g N per plot.

[c]. Elevation and dominant trees noted for each of 5 localities.

[d]. A portion of this collection is on deposit in CUP-JA 3508.

We find the hairs to be commonly up to 500 µm long, even rarely as long as 700 µm, with the base 20-40 (-50) µm broad, whereas Svrček reported them as 200-350 × 18-36 µm. We find the ascospores rather consistently 14-16 × 7-9 µm, while Svrček reported them as 12-17 × 7-8.5 µm. The type collection was from a burn site, with the second Czechoslovakian collection from humid soil among mosses and conifer needles.

The following new combination is formally proposed:

Humaria velenovskyi (Vacek in Svrček) comb. nov.

(basionym: *Lachnea velenovskyi* Vacek in Svrček (as *"Velenovskýi"*), Sborn. Nár. Mus. v. Praze, Řada B, Přír. Vědy *4B(6):* 51. Pl. V, fig. 5-6. 1948).

LITERATURE CITED

ECKBLAD, F.-E. 1968. The genera of operculate Discomycetes. A re-evaluation of their taxonomy, phylogeny and nomenclature. Nytt Mag. Bot. *15:* 1-191.

KORF, R. P. 1972. Synoptic key to the genera of the Pezizales. Mycologia *64(5):* (in press).

RIDGWAY, R. 1912. Color standards and color nomenclature. Washington, D.C.

SVRČEK, M. 1948. České druhy podčeledi Lachneoideae (čel. Pezizaceae). Bohemian species of Pezizaceae subf. Lachneoideae. Sborn. Nár. Mus. v. Praze, Řada B, Přír. Vědy *4B(6):* 1-95. 12 pl.